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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/750,459	12/31/2003	Paul A. Koning	884.A73US1	4978

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EXAMINER

HOANG, QUOC DINH

ART UNIT	PAPER NUMBER
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2818

DATE MAILED: 04/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/750,459

Applicant(s)

KONING ET AL

Examiner

Quoc D. Hoang

Art Unit

2818

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 16-20 and 25-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 21-24 is/are rejected.
- 7) ☒ Claim(s) 13-15 is/are objected to.
- 8) ☒ Claim(s) 3 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I (claims 1-15 and 21-24) in the reply filed on 02/02/2006 is acknowledged.

Specification

2. The specification has been checked to the extent necessary to determine the present of all possible minor errors. However, Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

3. A design patent and a trademark may be obtained on the same subject matter. The Court of Customs and Patent Appeals, in *In re Mogen David Wine Corp.*, 328 F.2d 925, 140 USPQ 575 (CCPA 1964), later reaffirmed by the same court at 372 F.2d 539, 152 USPQ 593 (CCPA 1967), has held that the underlying purpose and essence of patent rights are separate and distinct from those pertaining to trademarks, and that no right accruing from the one is dependent upon or conditioned by any right concomitant to the other.
4. Claim 3 is objected to because of the following informalities: in claim 3, line 2, the trademark "Mylar" is used. Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-4, 11, 12, 21 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Kyminas et al., (US Pat No. 4,474,920 hereinafter "Kyminas").

Regarding claim 1, Kyminas teaches an apparatus comprising:

an embossable substrate mixture 13 that includes a polymer and a release agent (col. 5, line 17 through col. 6, line 62 and Fig. 3).

Regarding claim 2, Kyminas teaches a substrate base 10, wherein the embossable substrate mixture 13 is a film over the substrate base 10 and is embossed (col. 4, lines 65-67 and Fig. 3).

Regarding claim 3, Kyminas teaches wherein the embossable substrate mixture 13 is a film over a film 19a that is attached to the substrate base 10 (col. 7, lines 65-67 and Fig. 3).

Regarding claim 4 Kyminas teaches wherein the embossable substrate mixture polymer comprises:

an epoxy resin; and

a hardening agent (col. 5, line 17 through col. 6, line 62 and Fig. 3). *Note that the filler is considered to be the hardening agent ((see col. 5, lines 23-45).*

Regarding claim 11, Kyminas teaches wherein the release agent comprises one or more components selected from the group consisting of polyethylene wax (col. 6, line 44).

Regarding claim 12, Kyminas teaches wherein the release agent comprises one or more components selected from the group consisting of low-molecular-weight branched polyethylene (col. 6, lines 49-50).

Regarding claim 21, Kyminas teaches an apparatus comprising:

a substrate base 10 (col. 4, lines 65-67 and Fig. 3); and

means 13 attached to the substrate base 10 for providing an embossable surface with reduced adherence properties to an embossing tool (col. 5, line 17 through col. 6, line 62 and Fig. 3).

Regarding claim 22, Kyminas wherein the means 13 for providing the embossable surface includes a polymer film having attached thereto means for releasing the embossing tool mixed with an epoxy resin (col. 5, line 17 through col. 6, line 62 and Fig. 3).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 5, 8, 10 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kyminas et al., (US Pat No. 4,474,920 hereinafter "Kyminas") in view of Friedman., (US Pat No. 5,534,593).

Regarding claim 5, Kyminas teaches the release agent comprises polyethylene wax, but does not teach the release agent comprises carnauba wax.

However, Friedman teaches wherein the release agent comprises carnauba wax (col. 4, lines 23-50). Since Kyminas and Friedman are all from the same field of endeavor, the purpose disclosed by Friedman would have been recognized in the pertinent art of Kyminas. It would have been obvious to a person of ordinary skill in the

art at the time of the invention was made to provide carnauba wax in the polymer in order to serve as a release agent to a embossing equipment as taught Friedman, column 4, lines 40-50.

Regarding claim 8, Kyminas teaches the release agent, but does not teach the release agent comprises one or more components selected from the group consisting of montanic acid, stearic acid, myristic acid, and combinations thereof

However, Friedman teaches wherein the release agent comprises stearic acid (col. 4, lines 23-50). Since Kyminas and Friedman are all from the same field of endeavor, the purpose disclosed by Friedman would have been recognized in the pertinent art of Kyminas. It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to provide stearic acid in the polymer in order to serve as a release agent to a embossing equipment as taught Friedman, column 4, lines 40-50.

Regarding claim 10, Kyminas teaches the release agent, but does not teach the release agent comprises one or more components selected from the group consisting of microcrystalline wax, urethanized microcrystalline wax and oxidized microcrystalline wax and combinations thereof.

However, Friedman teaches wherein the release agent comprises microcrystalline wax (col. 4, lines 23-50). Since Kyminas and Friedman are all from the same field of endeavor, the purpose disclosed by Friedman would have been recognized in the pertinent art of Kyminas. It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to provide microcrystalline

wax in the polymer in order to serve as a release agent to a embossing equipment as taught Friedman, column 4, lines 40-50.

Regarding claim 23, Kyminas teaches the release agent comprises polyethylene wax, but does not teach the release agent comprises carnauba wax.

However, Friedman teaches wherein the release agent comprises carnauba wax (col. 4, lines 23-50). Since Kyminas and Friedman are all from the same field of endeavor, the purpose disclosed by Friedman would have been recognized in the pertinent art of Kyminas. It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to provide carnauba wax in the polymer in order to serve as a release agent to a embossing equipment as taught Friedman, column 4, lines 40-50.

9. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kyminas et al., (US Pat No. 4,474,920 hereinafter "Kyminas") in view of Auger., (US Pat No. 6,030,692).

Regarding claim 9, Kyminas teaches the release agent, but does not teach the release agent comprises one or more components selected from the group consisting of fatty acid glycol esters, polyethylene glycol esters, laurate ester and combinations thereof.

However, Auger teaches wherein the release agent comprises polyethylene glycol esters (col. 7, lines 18-30). *Note that the anti-static agent is considered to be release agent.* Since Kyminas and Auger are all from the same field of endeavor, the purpose disclosed by Friedman would have been recognized in the pertinent art of

Kyminas. It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to provide polyethylene glycol esters in order to serve as a release agent to a embossing equipment as taught Auger, column 1 and column 2.

10. Claims 6, 7 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kyminas et al., (US Pat No. 4,474,920 hereinafter "Kyminas") and Friedman., (US Pat No. 5,534,593) as applied to claims 1 and 21 above, and further in view of Coomer., (US Pub No. 2004/0126547).

Regarding claim 6, Kyminas and Friedman teach embossable substrate mixture, but does not teach further comprising: metal wiring deposited in embossed grooves of the embossable substrate mixture; one or more electronic chips coupled to the metal wiring; and one or more external electrical connections coupled to the metal wiring.

However, Coomer teaches

metal wiring 14 deposited in embossed grooves of the embossable substrate mixture 2 ([0049] through [0058] and Fig. 1);

one or more electronic chips 10 coupled to the metal wiring 14 ([0049] through [0058] and Fig. 1); and

one or more external electrical connections coupled to the metal wiring ([0051] and Fig. 1).

Since Kyminas, Friedman and Coomer are all from the same field of endeavor, the purpose disclosed by Coomer would have been recognized in the pertinent art of Kyminas and Friedman. It would have been obvious to a person of ordinary skill in the

art at the time of the invention was made to provide metal wiring, electronic chips, and external electrical connections on the imprinted or embossed substrate in order to reduce complexity, time, and cost of fabricating substrate as taught Coomer, [0010] and [0079].

Regarding claim 7, Kyminas and Friedman teach embossable substrate mixture, but does not teach wherein the one or more electronic chips attached to the metal wiring includes a computer processor; the apparatus further comprising: further comprising: a memory operatively coupled to the processor; an input system and an output system operatively coupled to the processor; a power supply operatively coupled to the processor; and an enclosure holding the processor, the memory, the input system, the output system, and the power supply.

However, Coomer teaches wherein the one or more electronic chips attached to the metal wiring includes a computer processor; the apparatus further comprises: a memory operatively coupled to the processor; an input system and an output system operatively coupled to the processor; a power supply operatively coupled to the processor; and an enclosure holding the processor, the memory, the input system, the output system, and the power supply ([0049] through [0058] and Fig. 1).

Since Kyminas, Friedman and Coomer are all from the same field of endeavor, the purpose disclosed by Coomer would have been recognized in the pertinent art of Kyminas and Friedman. It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to provide a memory, input system, an output

system, power supply and enclosure holding the processor in order to obtain electronic assembly 5 and similar electronic systems as taught Coomer [0050].

Regarding claim 24, Kyminas and Friedman teach embossable substrate mixture, but does not teach further comprising: metal wiring deposited in embossed grooves of the embossable substrate mixture; one or more electronic chips coupled to the metal wiring; and one or more external electrical connections coupled to the metal wiring; a memory operatively coupled to the processor; an input system and an output system operatively coupled to the processor; a power supply operatively coupled to the processor; and an enclosure holding the processor, the memory, the input system, the output system, and the power supply.

However, Coomer teaches

metal wiring 14 deposited in embossed grooves of the embossable substrate mixture 2 ([0049] through [0058] and Fig. 1);

one or more electronic chips 10 coupled to the metal wiring 14 ([0049] through [0058] and Fig. 1); and

one or more external electrical connections coupled to the metal wiring ([0051] and Fig. 1).

a memory operatively coupled to the processor; an input system and an output system operatively coupled to the processor; a power supply operatively coupled to the processor; and an enclosure holding the processor, the memory, the input system, the output system, and the power supply ([0049] through [0058] and Fig. 1).

Since Kyminas, Friedman and Coomer are all from the same field of endeavor, the purpose disclosed by Coomer would have been recognized in the pertinent art of Kyminas and Friedman. It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to provide metal wiring, electronic chips, and external electrical connections on the imprinted or embossed substrate in order to reduce complexity, time, and cost of fabricating substrate as taught Coomer, [0010] and [0079].

Allowable Subject Matter

11. Claims 13-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: None of the references of record teaches or suggest the claim substrate mixture comprises: methyl ethyl ketone; diglycidyl Bisphenol-A; tetrabromo Bisphenol-A; ortho-cresol novolak epoxy resin; epoxy-terminated polybutadiene rubber; brominated phenolic novolak resin; 2,4-dinmino-6-(2-methyl-1-imadizolyethyl)-1,3,5-triazine.isocyanuric acid adduct; silica; and carnauba wax as claimed in dependent claim 13.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quoc Hoang whose telephone number is (571) 272-

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1780. The examiner can normally be reached on Monday-Friday from 8.00 AM to 5.00 PM.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on (571) 272-1787. The fax phone numbers of the organization where this application or proceeding is assigned are (571) 273-8300 for regular communications and (571) 273-8300 for After Final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Quoc Hoang
Patent examiner/AU 2818

Quoc Hoang
04/13/2006